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ON ALBINISM.

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THERE have recently been exhibited in Boston two female albino children, born in the State of New York, of parents perfectly black; there have been several other children born to the same parents perfectly black, and one other female albino, who died young. These girls are of about the ages of 4 and 7 years, and between them was born a black child; the parents are healthy. In these children the hair of the head, eye-brows, eye-lashes, and down on the body, are milk-white, with a slight yellowish tinge on the head; it presents, under the microscope, all the characteristics of the negro hair except color. The nose is flattened, the lips thick and protuberant, and the heels prominent, as in the negro; the voice, attitudes, movements and actions are such as are seen in ordinary black children; indeed, but for the color, they in every way resemble young negroes. The skin is everywhere very white and soft; the pigment is also absent from the eyes, and the iris and pupil have the characteristic pink color due to the coloration of the vascular choroid appearing through the translucent membranes of the organ. As the iris does not act as a diaphragm to shut off the excess of rays of light, but allows the whole flood to pour in upon the retina, these girls shield their eyes from the glare of the sun or artificial light by means of the hands, by partially closing the lids, and by a downward and lateral position of the head, as in ordinary cases of photophobia from disease; they are also near-sighted, and like to examine objects very close to the eye. They are playful, as intelligent as common uneducated children of their ages, with by no means a disagreeable expression of countenance; they are healthy, and as well proportioned as any of their race.

This condition of albinism has been noticed from the earliest historic period, and is no more a characteristic of a race than is that of gigantic or dwarfish stature, but is the result of an individual and accidental modification, and has occurred in all races and in all climates. It also occurs in mammals, birds, and fishes, as in the familiar cases of white monkeys, moles, ferrets, mice, rabbits, elephants, and otters; and in white crows, blackbirds, robins, martins, swallows, sparrows, parrots and ducks; and also in the silver variety of the gold fish. It is especially common among domesticated animals; some mollusks, as the genus *Oliva*, are occasionally albino; and perhaps the etiolation of plants kept in the dark may be brought under the same category.

Albinism is the most common, according to Is. G. St. Hilaire, in the races of tropical climates, interesting in connection with the fact that the nearer we approach the pole, the more the white color prevails in animals, as in the white bear, fox, ermine and ptarmigan. It is also the most common in the dark races, being very rare in the white races. It seems also to occur more frequently in females than in males, probably from their naturally more feeble constitution. There have generally been a large number of children in families presenting albinos; and undoubted cases are on record of albino twins.

Albinism may be complete, as in the case of these children—partial, or confined to certain regions of the body—or imperfect, in which pigment is not entirely absent. Perfect albinos are generally of feeble constitution and short lived, and most on record have died of phthisis. They are said in the books to be incapable of perpetuating their race *inter se.* This assertion does not appear to rest upon any foundation of actual experiment, and the circumstances which would render it possible must rarely occur in civilized regions; albino females, however, are fertile with black males, and produce, according to the observations of President Jefferson, progeny either entirely black or albino, and never one in part black and in part white. Albinos of other races in Europe have been proved to be prolific with individuals not albino. As white mice and albino rabbits are prolific *inter se,* it would seem *à priori* that there was no physiological reason why albino men and women should be necessarily sterile *inter se.*

Cases are on record of black persons becoming white in adult life; and pied individuals, both men and animals, with the spots unsymmetrically arranged, are sometimes seen. In imperfect albinism the color may be uniformly lighter than the normal, in pure races, displaying, as it were, the first degree of albinism. Perfect and imperfect albinism are always, it is believed, congenital; but partial albinism, at least in man, is generally if not always acquired, and the result of a diseased modification of the pigment cells not well understood.

There is another class of facts which it would seem must be explained by any hypothesis which would account for albinism—such as the rapid change of the human hair from dark to white, from fright or grief, in so short a space of time that there could be no alteration in the texture of the hair—the change to white in the winter covering of arctic mammals and birds, as in hares, the ermine, the grouse, &c. These may possibly find an explanation in the way formerly suggested by Dr. Weinland, viz., by some chemical change in the oily matter of the pigment from acid or other ill-understood cause, or by a rapid reabsorption of the coloring matter, as takes place slowly in the natural progress of age.

There is an opposite condition of the system, called *melanism*, in which there is an excess of coloring matter in the skin, hair, and iris; this is more common in domesticated than in wild animals, and occurs with partial albinism, this co-existence of opposite anomalies indicating that the causes which produce the deficiency and excess may be local in their character. The genus *felis* (the cats) is very subject to melanism, while albinism is rare in this family. Unlike albinism, melanism is most common in temperate and even cold climates. Dr. J. C. Prichard alludes to three cases of children born albinos, in which coloring matter in the course of their growth was developed in the skin and iris.

It is beyond dispute that albinism depends upon a congenital absence of pigmentary matter in the skin, hair and iris. According to Quekett, this pigmentary matter in the eye (and it is doubtless very much the same in the skin) consists of granules of a peculiar animal principle, the chief constituent of which is carbon, and on this last account the strongest acids and chlorine are incapable of destroying the color; in albinos, he says, the pigment cells exist, but they are destitute of the granular pigment matter.

There is a time in the growth of the embryo, when there is no pigment, and albinism would seem to be an arrest of development in this direction just at this point, the other characters of the black race (in the present and the most common examples) going on to their ultimate development, indicating that color is rather an accidental than an essential character of races. Other facts pointing towards an arrest of development are the uncommonly downy skin and the persistence of the fœtal pupillary membrane in albinos beyond the ordinary time of their disappearance.

The question then arises, what is the cause of such an arrest of development? It is hardly worth while to mention the fabulous physical, mental, and moral causes; neither does it seem due to any well ascertained debilitating causes. Dr. Addison, a few years ago, and more recently Dr. Brown-Séquard, maintained that the supra-renal capsules are not mere transitory embryonic organs, like the thymus gland, but that they are of permanent utility, presiding over the secretion of pigmentary matter in the animal economy. Hundreds of dogs, cats, Guinea pigs, rabbits, and rats, met an untimely end, from the removal of these capsules, in order that that the latter physiologist might be able to say that the blood of these animals contained an increased amount of pigment and often in plates larger than the diameter of the capillaries of the brain, and that death took place sooner after this operation than after the removal of the kidneys themselves. From this accumulation of pigment in the blood of animals, and in a few instances in the human skin when these capsules were found diseased, it has been concluded that the function of these organs is to modify the substance capable of transformation into pigment. If, then, cessation of the function of these organs lead to excess of pigmentary matter in the blood and skin, it would seem that their increased action might in the same way be connected with deficiency of coloring matter, and indeed with congenital albinism. Other physiologists, however, deny that there is any necessary connection between the supra-renal capsules and the production of pigmentary matter, maintaining that in the case of man the connection has been merely accidental, and that the death in the case of animals was not due to any accumulation of pigment in the blood, but to the inflammation or other results of such a severe operation. These capsules have been removed from albino rats, and the animals have survived from two to ten weeks, whereas in ordinary animals death is sudden when their functions have been quickly and completely arrested. The fact, if it be a fact, that pigment matter is accumulated in the blood after the removal of these capsules, whether the cause of death or not, and the longer survival of albino animals in which, as no pigment is formed, this modifying function of these organs would find no chance for exercise, would seem to show some connection between the capsules and the distribution of pigment; but experiments show, according to Brown-Séquard, that even albino rats die in two or three days after the simultaneous removal of both capsules, indicating that they have other important functions in the animal economy than the modification of pigment matter. The present condition of physiological science does not show conclusively a connection between the supra-renal capsules and the state of albinism, any more than between the latter and the equally embryonic thymus and thyroid glands. We must therefore apparently look to the pigment matter itself for an explanation. This has been seen to be highly carbonaceous. Sachs, an albino himself and having an albino sister, says that, according to the chemist Vauquelin, albino hair contains no iron. As this element gives color to the red corpuscles of the blood, it has been supposed to be concerned in the coloration of pigment matter. How far this last may be connected with the phenomena of albinism may be interesting from the occurrence of discoloration of the surface in chlorosis and the blanching of the hair in chronic and debilitating diseases. There are cases, too, in which the preparations of iron administered internally have arrested the change of dark hair to gray, and have even restored the black color. Physiological chemistry does not yet enable one to decide to what subtle alchemy of nature's processes the arrest of development in regard to pigmentary matter is due—whether to some deficiency in the iron of the blood of the mother or the child, to unnatural activity of the carbon-eliminating organs, to an insufficient supply of the carbonaceous materials of the pigment, or to some other cause or causes entirely different from these.

As an example of the use to which albinism has been put by the advocates of the specific unity of the human races, it may be stated that Dr. John Davy, brother of Sir Humphry Davy, says, in his work on the Island of Ceylon, that albinos are frequently seen there; he describes one, 12 years old, as having light blue eyes, light hair, a fresh and rather rosy complexion, such as would not be regarded as peculiar in Norway or even England. Though this does not answer to what is properly albinism, Prichard makes it an argument in favor of his theory, and quotes further from Dr. Davy, approving of the following remarks of the latter. "It is easy to conceive that an accidental variety of the kind might propagate, and that the white race of mankind is sprung from such an accidental variety. The Indians are of this opinion, and there is a tradition or story amongst them in which this origin is assigned to us." This would satisfy the most ardent advocate of Mr. Darwin's theory of the origin of species by natural selection.

The following examination, by Dr. B. Joy Jeffries, is interesting in connection with the foregoing remarks.

An ophthalmoscopic examination of the eyes of the two albino children, now at the "Aquarial Gardens," was made on Thursday, by permission of Mr. Laggon. The pupils were *not* artificially dilated. The light used was a *single* common candle. The instrument employed, that of Prof. Edward Jäger, manufactured by Kraft, of Vienna.* Only the *weak reflector* was used, which is composed of three plane-surfaced pieces of glass, laid together. The constant *voluntary* motions, and, after a few seconds of steady gazing, the involuntary oscillations of the eyes *from side to side,* in a horizontal direction, naturally rendered a perfectly satisfactory examination impossible. Yet, after carefully looking, during the few seconds that the eyes could be kept fixed, the following was made out with the "upright image." The general coloring of the bottom of the eyes was very light red, but darker in the younger of the two children, whose sight Mr. Laggon thought was the better. This child appeared also to be somewhat near-sighted. Its power of accommodation, the ophthalmoscope showed to be active. The retinal vessels, so far as could be traced, were normal. They appeared to stand out more in relief than in an eye in which pigment is present, probably from the contrast to the general light coloring. The entrance of the optic nerve was not readily distinguishable, on account of its injected state, and the consequent *want* of contrast between it and the surrounding choroidal vessels.

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* A description and engraving of which is given in a pamphlet entitled "Uber Staar und Staaroperationen," Wien, 1854.

The fine granulated appearance which the bottom of the normal eye has, when viewed with the "image upright," was of course wanting, and, instead of this, the delicate anterior and coarser posterior vessels of the choroid were seen. From the want of pigment behind and between them, their outlines were not so marked as might have been expected. This was also owing to the white sclerotic shining through their meshes, and thereby adding to the general *light color* of the bottom of the eye.

The appearances are therefore those which would be, *a priori*, expected, and which are, to a greater or less extent, found where disease has loosened and removed the normal pigment of the choroid, and broken down the "internal pigment layer," and so left that portion of the eye affected, similar to the state in which it is found in the albino.

It may be said that an ophthalmoscopic examination of the eye of an albino would be hardly possible with any other form of instrument, or with a much stronger light; for in sunlight they are almost blind, so great is the amount of light received upon the retina through the pupil, *iris* and *sclerotic*. Not that they see any *better* than others in a dim light, but they *cannot* see in a strong one. The amount of light thrown into the eye by the instrument used, may be easily found by placing three pieces of clear thin window glass upon each other, and, in a darkened room, holding them a few inches from the eye, and reflecting into it the light from a single candle held on a level with, and a few inches from, the ear of the same side. With these children it was not enough to cause contraction of the pupil sufficiently to interfere materially with the examination. This is in general all the light that is requisite with this form of ophthalmoscope.

The power of accommodation of course greatly interfered in such an examination. Could this have been destroyed for the time being, by artificial dilatation of the pupil, a much more minute and prolonged view might have been obtained, even in spite of the curious and perpetual horizontal oscillation of the eyes in both children. But, with dilated and fixed pupils, the light of the exhibition room would have been intolerable for these albinos who were about to return to it at the time of examination.

The reflection of light from the bottom of the eye, which gives the pink instead of the ordinary black appearance to the pupil of the albino, shows that but little more light need be thrown in upon it to render it visible, and, could the observer's eye be rightly placed to receive the rays of light reflected out of the eye, perhaps the retinal and choroidal vessels might be seen without artificial aid; for, in addition to that which passes through the pupil (most of which would be intercepted by the observer's head) a good deal must go through the iris, and more particularly the sclerotic. The albino's iris appears darker than it really is, by the shade thrown upon it, particularly in a side light, by that portion of the slcerotic which projects forward beyond the outer edge or attachment of the iris.

No print of the bottom of the eye of the albino can be referred to, for, unfortunately, by an unforeseen accident, Prof. Jæger was prevented from adding one to his truly wonderfully truthful delineations of ophthalmoscopic appearances, entitled "Beiträge zur Pathologie des Auges," Wien, 1855.

DR. ELWELL'S MEDICO-LEGAL TREATISE ON MALPRACTICE AND MEDICAL EVIDENCE.

[Continued from page 241.]

THE physician is summoned by the government or the defence. He is a witness for both. The examination *in chief* being finished, he is passed to the cross-examination, with a "*the witness is yours.*" This relation to a trial should never be lost sight of by the witness. It aids him in every way. He is for no party. He is for justice, not for a man. His memory is aided, and he keeps to his facts. If he goes for a moment out of these, it is only to give them more life—more force. No matter what may be the tone of the cross-examination—no matter what the effort to break him down. He is calm—firm—cool. He knows the object which would now oppress him—viz., a verdict—and he feels, if he feel at all, that that is the true object of the issue. The deep sense of duty —the solemn precept under which he speaks—the deep sense of his whole responsibleness, never hurts him. It amazingly helps him, and makes noble and true—at least to himself—what he says. The jury always sees this, and for defence nothing can be stronger.

The physician in court must carry with him all the knowledge of his case which he can possibly attain to. He is to make a diagnosis both differential and direct. He may get previous knowledge at second hand, through counsel, or from the accused. He is consulted. The case is stated. His views of it obtained. If to be summoned, he knows it, and makes preparation for his office. However the mode, let him get knowledge—wisdom—for it will be truly power to him.

A question arises here, which it is very important to answer. Is the expert to believe all he learns? His belief must often be much after the order of faith, as is the case in his daily professional relations—it must be very much the substance of things hoped for, the evidence of things not seen. He may be told that the opinions of an expert are facts in law—another mode of presenting the apostolic formula. But of infinite importance is it—

this character of his opinions—when looked at in their legal significance. It invests what we may say in court with sacredness, and with beauty. It gives to ratiocination that mighty alchemy which converts thoughts into things—thoughts which Mr. Coleride says are stronger, of infinitely more power, than are things, which are matters to be seen, before believed—thoughts which cannot be seen, but like the hidden principles which govern the physical world, are the basis—the foundations—of human action as well as belief.

Is the physician compellable to reveal what has come to his knowledge in his professional relation to patients? On this subject, Dr. Elwell has the following:

"This (compellability) is the Common Law rule undoubtedly, in both England and this country; while some of the States, like New York, Missouri, Wisconsin, Iowa, Michigan, and perhaps some others, have passed a statutory rule on the subject, in the following language: 'No person, duly authorized to practise physic or surgery, shall be allowed to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe to such a patient as a physician, or to do any act for him as a surgeon.' But a physician consulted by the defendant in an action on the case for seduction, as to the means of producing abortion, is not privileged from testifying under this statute, as the information was not necessary for a proper prescription."—P. 320.

"By the laws of New York and Missouri, no minister of the Gospel or priest, of any denomination, is allowed to disclose any confession made to him in his professional character, in the course of discipline enjoined by the rule or practice of his denomination."—P. 328.

Difference of opinion prevails on this important subject of privilege. By far the larger number who have treated it, deny the privilege. Very respectable authority, however, and Greenleaf among them, argue for it. Among physicians are John Gordon Smith, of England, and Charles A. Lee, the American editor of Guy's Forensic Medicine. Attempts have been made to avoid the disclosure of secrets of the professional relation of medical men. But they have always failed under the rule of the Common Law. Statutes may ride over this, as in the States alluded to. In England, Mr. C. Hawkins, in a celebrated peerage case, demurred to a question which involved facts which had come to him in his professional attendance on the Duchess of Kingston. But upon consultation, the court required his testimony, on the ground that such testimony was not privileged. We remember a case in which a physician claimed the privilege of the Catholic clergy, and refused to testify, but his claim was not allowed. Our author, in the passage quoted above at length, on the statute of several States which exempts experts from testifying to facts disclosed by professional interrogatories, says—"But a physician consulted by the defendant," &c. &c. We question this position, on the ground that the knowledge of the means by which abortion has been procured may be absolute "essential to a proper prescription." All sorts of means are used. We have in mind one in which the person used quite a novel method to procure abortion upon herself. She first tried wire, but it failed, as it stuck into the vagina and so was fixed. She withdrew, and *bent* it, pressing the bent portion very close to the shank, thinking it would retain its position. It went readily into the womb; but to withdraw it was impossible—*facile est descensus.* After taking all the pains, and pain, she could take, or bear, she gave in, and sent for her medical man. He tried and failed. We were next summoned, and we failed. Our object was to introduce the finger into the womb, then to press the wire upwards so that its point should be free, and then, by resting the point on the end of the finger, to withdraw them together. It was impossible to dilate the os and neck sufficiently to do this. We left, to come again in the afternoon, and try another method.

In our absence, and to facilitate matters, the attending physician cut off the wire (as it hung awkwardly out of the vagina), and as close to the os uteri as his instrument would reach. This prevented all further attempts at reduction. Many years have passed since this strange passage in Mrs. ——'s life. She has been perfectly well. The wire remains in *statu quo*, and, what is almost as strange as any other fact in the history, she was *not pregnant* when she attempted abortion; nor has she been pregnant since.

The medical man is not compellable to answer a question, if the answer can make him liable to a criminal prosecution. Mr. Surgeon Patmore went out in a duel as a surgeon. One of the parties was killed. The survivor was tried, and Mr. Patmore was summoned as a witness. A question was put to Mr. P.; but before it was answered, the presiding judge said that if in his answer anything might be contained which would render him liable to a criminal prosecution, he was not bound to answer it. Mr. P. said that he should not answer it. The government in this step probably deprived itself of very important testimony, rather than act unjustly towards a witness, or withhold from him the protection of law.

It was said that the physician in court should be calm—sustained by his knowledge—in his intellectual and moral repose, and most careful to avoid the position of a partizan. He is tempted to a different course than here indicated. In court, he is out of the sick chamber. In the latter he is a ruler. His office is the highest delegated to man. He is to do all man can do, to lessen suffering, and to save from death, and he acts with the great advantage of possessing the confidence of the sick, and of their friends. He is here a questioner. He examines the sick, and their attendants; and it is understood that the strictest scrutiny is to be daily made into all which relates to the case. The strong motive of interest secures fidelity in the questioned. The physician here is the Supreme Court as well as counsel. He collects the evidence, and passes judgment.

In court, the reverse of all this is the position of the physician. He is literally put *to the question.* All sorts of questions are put. Some of them it is not possible to answer. They are nothing but confused, impossible statements, offered as possible—as having a relation to matters under inquest, but which absolutely relate to nothing. Another mode of presenting the question is asked for. This is attempted, but it is clear to the witness that nothing can come of nothing, as it was when the same apothegm was propounded ages ago. Nay, what is still worse, when the question seems to have a meaning, the answer may be all Greek to the inquirer. It is hard to avoid technicalities in these matters. But words in common use in physic and in law, are not correlative. Thus, *descent,* in law, is the transmission of the right and title to lands to the heir, on the decease of the proprietor, by the mere operation of law; the operation of no principle whatever. In surgery, *descent* means *hernia,* and is a result of a principle in physics. Again, *jactitation,* in medicine, means the irrepressible tossings of the patient in acute disease—often a most alarming symptom. In law, *jactitation* is a purpose of marriage. Then, *action,* and *case,* have their meanings in law, in nothing resembling those in medicine. In the latter, *action* means function, whether healthy or morbid; *case* means disease, as manifested in its subjects. We need not offer other instances. How difficult must it be to reach the whole truth, when sought for under such circumstances. And yet, life may be at stake. It may happen that the medical witness gets some notion of what is demanded of him, and his reply may show it. He may sometimes hypothetically answer in such a case, and so render important service to both counsel and issue. If his mode of regarding, or of putting the question, fail to accomplish the object proposed, the counsel will say so.

There is another matter connected with the present, which deserves distinct notice. If the expert does not understand the question, it is very often his best course to acknowledge his ignorance of the subject. Let this be done distinctly. The question may be presented in another form. If not understood, let this be at once stated. A medical witness is sometimes tempted to cover his ignorance by giving an opinion touching the point presented, and which point involves a fact. The witness, we are persuaded, will in such a case do more by a simple *no,* than by the best circumlocution he may resort to.

In his manner, the medical witness should manifest his sense of the importance of his office, and in the best way meet its requirements. Deliberation in manner can hardly be ascribed to doubtfulness as to communications in court, if distinctness—occasional emphasis—accompanies it. At times, a question, having an important relation to the case, is put after such a manner as declares its whole meaning. Such a question may require thought. It is to be seen by the witness in all its bearings, and should be answered accordingly. When this is done—ably, thoroughly done—the witness will see its effect on the jury at once, and feel how important is the point which has been gained. No physician was ever on the stand who has been able so to accomplish his important office, who has not seen what he has effected, it may be in the gravest issue; and felt the satisfaction which such a service to public justice always brings with it.

We remember a trial for murder, of singular obscurity, making the office of the professional witness exceedingly embarrassing. A witness who preceded us, was almost ludicrously deliberate. The day was hot, and the witness was long on the stand. He was very thirsty, and frequently called on an officer of the court for cold water. He would always wait at rest till the water came. After the trial, we asked him how he had succeeded on the stand, for he was long under the harrow. Said he, "The day was very hot, and I was very thirsty, and I always found myself most thirsty when I did not fully understand the question. So while the officer was gone for water, I thought over the question and the answer. I never drank so much water, in the time, in my life." I afterwards asked the counsel for the prisoner, what sort of a witness was my friend, Dr. —— in ——'s case. Said the counsel, "I never had a better witness."

It was in this case that the above legal friend told me of a witness who broke in upon him one evening when he was exceedingly occupied in preparing for the next day, saying that he had a very important witness for the defence. "Who is it?" asked Hon. Mr. ——, with much temper. "An angel appeared to me last night, Sir, and said that Mr. —— was innocent." "Let him be summoned!" screamed out the irritated counsellor.

In this case a medical witness for the government sat at the elbow of the Attorney General while we were undergoing cross-examination, and was seen to be passing slips of paper to him on which were questions for us to answer. Of these questions, the Attorney probably knew as much as the jury, and my answers being strictly professional in meaning and technical in language, as such questions from such a source strictly demanded, it is very probable that little light was shed. We hardly know of a more mistaken and absurd mode of reaching useful knowledge than this, where experts are witnesses.

Questions are sometimes put which cannot be answered, and others which should not be answered. For the most part these last arrest the attention of counsel for or against, and an appeal to the court for judgment is made. But sometimes questions get in without challenge, which the witness believes he is not obliged to answer. In such a case he has a perfect right to appeal to the court himself. We have been in situations in which such appeals have been made. In a trial for murder, we had been some hours on the stand, and were about leaving it, when the prosecuting officer said he had one more question to ask. It was, if it were not possible for us to have been influenced by our views of capital punishment, in our testimony. We appealed at once to the court, addressing the Chief as follows:—"May it please your Honor, I am surprised at this question of my learned friend, for at the very last term of this court I was called by the government in a trial for an alleged murder. I wrote at once to my friend, the present public prosecutor, stating at much length my views of capital punishment, and asking if he might not think that they would bias me in my testimony. My friend has probably this letter still in his pocket. My views were not regarded as objections to my appearing for the *government*. But now, please your honor, when I appear for the *defence*, I am questioned concerning bias. Am I obliged to answer the question?" The answer was, *No*. The great auditory showed their pleasure at the answer.

In another capital trial, certain women of most abandoned character being at the time in the house in which the alleged felony was committed, were the principal witnesses for the government. We were leaving the stand which we had occupied for hours, when the attorney for the government said he wished to ask another question, viz., if our testimony might not have been influenced by the character of the government witnesses. We again asked the judgment of the court. We asked, if we were the judges of these declared infamous witnesses of the government—whether, if their character was such as to destroy their credibility, they should have been witnesses at all—and more to the same point; the appeal ending with the question if we were obliged to answer the inquiry. It was ruled that we were not. We believe that the effect of these questions and these answers upon the jury was as much for the benefit of the prisoner, if not more, than any part of our testimony in chief; and in this way. It settled the moral character of that testimony, and this was much more likely to influence the twelve men, than the best scientific statements and arguments an expert can present. The people felt it.

We have seen the same or a similar effect produced in another way. This was in a case of capital felony, in which we were called as an expert. Our appearance in the court was objected to by the government, in a manner so nearly approaching rudeness, that it might have annoyed a sensitive person, but we had very often been in court before, and were not troubled. The court ruled that our appearance was not necessary. Our office would have been to have rebutted the testimony of another medical witness, which had been given the afternoon before. The ruling was of course decisive, and for ourselves we had no occasion to complain of it.

We kept our eye upon the jury during the arguments against our appearing, and it was clear to us that the effect upon it was for the benefit of the accused. They saw and felt that there would not have been so much effort made to suppress our testimony, if it was not believed by the government that it would have had some important influence upon the jury. Silence here was gold!

[To be continued.]

Bibliographical Notices.

Memoir on the Salubrity of the Isle of Pines. By Dr. DON JOSE DE LA LUZ HERNANDEZ, Physician and Surgeon of the Royal House of Beneficencia, &c. Habana: 1857.

THERE is a small island, a few miles distant from the southern coast of Cuba, towards its western extremity, in past times the resort of pirates and fillibusters, which, from the salubrity of its climate and the virtues of its mineral waters, is beginning to attract considerable attention as a resort for invalids. From the interesting pamphlet which we have received from Dr. Hernandez, a physician of distinction, we gather much information with regard to the soil, climate, mineral and vegetable productions of this island, and also the benefits received by quite a number of patients who have recently resorted thither.

The extent of this island is about one hundred and eighty square leagues; its length, from east to west, being about twenty-one, and its breadth, from north to south, thirteen and a half leagues; and it is distant about thirty leagues from Havana. Although not more than thirteen leagues from the Cuban coast, the Isle of Pines differs widely from that fertile island in the character of its climate, soil, and mineral productions. The climate would seem to approximate to that of the Isle of Wight, and is more equable, and far more salubrious than that of Cuba, the atmosphere being purer and drier, and the temperature more unvarying—circumstances, as the author states, that certainly promote most favorably the physiological reaction indispensably necessary to correct a diseased condition.

The mineral resources of this island seem to be great and various; and the waters, combining, as they do, chalybeate and saline properties, have proved peculiarly efficacious from their tonic and alterative virtues. These waters, according to analysis, differ essentially from the mineral waters of Cuba.

The pamphlet of Dr. H. gives an interesting account of the mineral and vegetable productions of this beautiful island, and the author looks forward to the time, when, by the aid of government, it will emerge from the state of contempt and neglect in which it has been so long held, and require the renown it merits, not only as a place of resort for the sick, but as an agricultural province, capable of adding to the revenues of the State.

From the numerous cases reported as benefited by a residence there, it appears that it is peculiarly serviceable in phthisis, and other affections of a scrofulous nature; in lymphatic and nervous patients; in syphilitic diseases; certain affections of the stomach, as gastralgia and some other forms of dyspepsia; diseases of the skin, and chronic dysentery; in short, all affections occurring in debilitated constitutions, and requiring an equable temperature, and mild alterative and tonic treatment.

Food for Babes, or Artificial Human Milk; Its Mode of Preparation and Administration. By Wm. Henry Cumming, M.D. N. York. 1859.

The object of this little book is to impress upon parents, as well as physicians, the importance of a proper food for infants, and the evils that arise from that too often substituted for the nutriment supplied by nature, when, from any cause, this is deficient. That which he suggests most closely resembles the natural secretion of the breasts in vigorous, healthy women, and hence offers to the child all that he needs for growth, development, warmth and activity. He believes, what is undoubtedly true, that a large proportion of the sicknesses and deaths of infants is the direct result of insufficient and improper food, and that, by the use of that recommended, the health and lives, of tens of thousands may be annually saved.

We fully agree with the author, that the painful dentition, colics, wasting diarrhœa, and that most fearful of all diseases among children—cholera infantum, are too often consequent upon the unscientific and badly-prepared compounds with which infants are fed; and that the therapeutical importance of a due regulation of the diet in these diseases cannot be overrated.

To obtain a compound which shall contain the right proportion of butter and casein, the two most important elements of human milk, he recommends that the upper third of cow's milk which has stood for four or five hours, be taken, this containing fifty per cent. more butter than the ordinary milk of the cow; or, if in the summer, the latter half, given by the cow at a milking, is equally good. The cow should be healthy and vigorous, from four to ten years old; her calf not less than two weeks, nor more than five months, old; and her food should consist of hay or grass, salt and water, without slops of any kind.

The dilution of the milk thus obtained, should vary with the age of the infant, being made more nutritious by the addition of less water, as the child advances. For the first month, dilution with one-and-a-half times the quantity of water is sufficient—less water being required for each succeeding month. The water should be soft, and sufficient sugar should be added to make the whole only a little sweeter than that of the cow.

Many of these details seem perhaps unnecessarily minute, but we are convinced, if observed, much sickness will be prevented and a healthier race of children be the result.

Dr. Cumming has given to the public a book, the size and contents of which, should ensure it the usefulness it deserves.

Tenth Annual Report of the Association for the Relief of Aged, Indigent Females. Boston: 1860.

From this, it appears that there have been admitted during the year, seven persons; that five have died, and that there remained in the Institution, on the first of January, 1860, fifty-seven inmates. Although the expenditure of the past year has not been fully met by the donations of those interested in the welfare of this excellent Institution, we have no fears that its charitable objects will be forgotten by a community which boasts of its benevolence to the poor and suffering.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, APRIL 26, 1860.

The Necessity of Re-vaccination.—As the subject of re-vaccination is one upon which there has been a difference of opinion among physicians, and as it involves a point of much practical importance, we are glad to be able to give, at the suggestion of Dr. Jeffries, the extracts referred to by him in the following communication:—

15 Chesnut St., Boston, April 5, 1860.

Messrs Editors,—As the opinion has recently been expressed in your Journal that re-vaccination is unnecessary, "for it will give no additional protection to those who have been already duly vaccinated, but is troublesome, attended with some expense, and not wholly free from danger," and as this is not the belief of many, will you, for the benefit of your readers, quote those portions of two articles in the April number of *The American Journal of the Medical Sciences* which touch upon this very important question? and oblige

Respectfully yours, B. Joy Jeffries.

The following is the summing up of M. Marc D'Espine's elaborate memoir on the epidemic of variola, in the Canton of Geneva, in 1858 and 1859:—

> "The epidemic of 1858–59 has been by far the most severe of all those which have visited the canton since the introduction of vaccination. It attacked 21 individuals in 1000 inhabitants, and gave rise to 2.3 deaths, one half of these depending upon a hæmorrhagic cause." * * * * *
>
> "The *elective age* of natural variola is childhood and infancy. In countries in which vaccination is but little or not at all practised, variola attacks but few adults; but in proportion as a population has been more generally, and for a longer period, submitted to the vaccine influence, variola attacks a larger proportion of the older vaccinated, and spares children protected still by recent vaccination. In those countries in which nearly the whole of the new-born infants have been vaccinated for a long time past, it is from the twentieth to the twenty-fifth year that variola attacks most of its subjects; children below ten years of age being rarely affected.
>
> "*Re-vaccination*, made at opportune periods, greatly increases the chances of preservation, and evidently alleviates the disease in those individuals whom it has not been able to secure against the attack. It seldom succeeds in producing satisfactory pustules until after ten years of age. On this account, then, and because the first vaccination affords sufficient protection at least until ten years, it is at about from the twelfth to the fifteenth year that the first re-vaccination should be performed. A second may be resorted to at about the age of thirty; but this is of less consequence than the first, inasmuch as the examination of facts show that the chance of contracting variola diminishes much after the age of thirty. Nevertheless, just as the more general practice of vaccination has transposed the age of the maximum of frequency of variola from infancy to the fifteenth, twentieth, or even twenty-fifth year, a generalization of the practice of re-vaccination at about the twelfth or fifteenth year may thrust back this maximum beyond thirty years; and we may predict that with the progress of primary vaccination, a second towards the thirtieth, and even a third towards the fortieth year, may one day become requisite. Vaccination or re-vaccination, practised even at the height of an epidemic, when complicated by an immediate invasion of the variola, neither modifies the progress of this, nor is itself modified by it. **We may therefore vaccinate during an epidemic with impunity.**

> "It would seem that a first variola preserves somewhat more certainly from variola than a first vaccination; but that if variola does supervene, that which is secondary is more fatal than is the varioloid following vaccination.
>
> "Cowpox appears to succeed somewhat better than the chain of Jennerian virus, both as a prophylactic, and as to the pustules it gives rise to; but virus passed from man to the cow, and then from the animal to man, derives no advantage from such passage."

In connection with the above, we may refer to the following facts published in the *Medicin Zeitung*. We find it there stated that—

> "Variola, which had acquired a considerable extension in Prussia in 1857, increased very much in 1858, both as regarded the number of localities invaded, and the number of individuals attacked. It some places it assumed an intensity which called to mind the ravages of the cholera. In 1857 there occurred throughout the entire monarchy 8,922 cases, but in 1858 there were 30,843 cases observed in 2,668 localities. Of this number 2,789 individuals died, a mortality therefore of 9 per cent., that of 1857 having been 10 per cent. * * * *
>
> "Of the 30,843 patients, 25,995 had been vaccinated, and 4,758 were unvaccinated. There were, therefore, 15 per cent. unvaccinated. The proportion was 10 per cent. in the adult (2,331 in 22.209 cases), and 28 per cent. in the children (2,427 in 8,634 cases). Of the 25,995 vaccinated, 1,730 died, *i. e.* 7 per cent.; and of the 4,758 unvaccinated, 1,055 died, *i. e.* 22 per cent. A mortality of two thirds less in those submitted to vaccination, strongly exhibits the power of this in mitigating the severity of the disease. The influence is somewhat less manifested in the children than in the adults; for while of the 6,187 who had been vaccinated, 503 (8 per cent.) died; of the 19,808 of the vaccinated adults, 1,227 (6 per cent.) died. The mortality in the non-vaccinated also varied considerably. Of 2,427 children, 782 (32 per cent.) died; and of 2,331 adults, 273 (12 per cent.) died. Summing up the figures, we find, then, that in vaccinated children 8 per cent., and in unvaccinated 32 per cent. (*i. e.* four times as many), die; in vaccinated adults 6 per cent., and in unvaccinated 12 per cent. (twice as many), die. These facts surely speak highly for the protective power of vaccination, and for its beneficial influence on the course of the disease. The whole of the recruits for the army, about 40,000 per annum, are re-vaccinated; and re-vaccination being always resorted to when epidemics exist, the prevalence of smallpox within its ranks has been almost entirely prevented."

WE publish the following communication in reply to that of J. C. M., which appeared in our issue of April 12.

MESSRS. EDITORS,—The writer, in drawing up an account of Dr. Martin's vaccine experiments, was simply actuated by a wish to state an event in the history of variola, which, from the remoteness of its occurrence, was probably not familiar to the medical public of the present day. He disclaims any intention to wound the feelings of Dr. M., and has never heard him mentioned but with respect and regret for his misfortunes. With him he is personally unacquainted, and has never been a cotemporary, Dr. Martin having been long withdrawn from practice, and for a considerable time from the town. This the writer believes will prove the absence of sinister motives, or an attempt to misrepresent occurrences. The readers of the JOURNAL are only interested, however, to know the facts of the experiment and their incontrovertible results.

After recounting the details preliminary to the vaccinations in which matter derived from an inoculated cow was introduced into the human subjects, and the primary symptoms exhibited, your correspondent, who would deny the writer's correctness, says,—"A few days elapse and a cloud comes over the scene. There is some anxiety and alarm. Unlooked-for symptoms exhibit themselves in some of the patients.

Physicians are again called, and visit the patients ; they revoke their opinions and report adversely." That is, they decide it is not kine-pox, as at first supposed, but smallpox. The trivial errors in stating the year to be 1836, instead of the preceding ; the writing of Dr. Fuller's name Sylvanus, instead of Lemuel ; and that the variolous matter was inserted into the udder instead of the teat, have no material bearing upon the case.

The admission that Dr. M.'s cotemporaries, to use his own language, "reported adversely," carries the opinion that smallpox was not induced by him, resting upon the experimenter's assertion alone. Dr. Fuller and Dr. Manchester believed the disease was smallpox, and both were far removed from the imputation of being influenced by inimical motives, or a disposition to persecute an unfortunate young man. These gentlemen are both dead, but their belief is not a matter of conjecture.

The writer is as little disposed to annoy Dr. M. in his long retirement, broken in health and spirits, as to conduct a controversy with him thus ; and while he feels at liberty to make reference to facts as public, as in this case, he regrets the occurrence of anything disagreeable to Dr. M.'s feelings. S.

Attleboro', Mass., April 18th, 1860.

DISLOCATION OF THE HUMERUS. *Messrs. Editors*,—I have succeeded several times in reducing dislocations of the humerus into the axilla, by the following process. Placing the patient upon his back, on a bed or a table, I seize the arm, with one hand just above the elbow and the other near the wrist. I first carry the arm across the body of the patient as far as I can without the employment of much force. I then flex the elbow, which causes the hand to point over the shoulder of the opposite side. Then, on slightly rotating the arm outwards, the bone at once slips into its place. The operation requires but very slight force, and occasions very little pain. I succeeded in one case, in reducing the luxation in this manner, after quite powerful extension and counter-extension had been tried without the least effect.

Respectfully yours, ALBION COBB, M.D.

Saccarappa, Me., April 20, 1860.

IODIZED GLYCERINE IN SKIN DISEASES.—This solution is prepared after the following formula : R. Potassii iodidi, et iodini, each ʒi. ; glycerinæ, fʒij. Add the iodide of potassium to the glycerine, and when solution is effected, add the iodine. A few minutes' agitation will cause a perfect dissolution.

This solution has the great advantage over alcoholic solutions of not drying ; in consequence, the surfaces remain supple, and the absorption and action of the iodine is much prolonged. It should be applied to the affected part and covered with gutta percha paper, to prevent evaporation and increase the perspiration of the part. It is left untouched for twenty-four hours, and the degree of reaction regulates its further application. The application of water will readily remove all traces of the solution. This solution occasions pain, which varies in intensity and duration according to the state of the diseased part and the sensitiveness of the patient. There has, however, never been any general inconvenience. On removing the application, the healthy skin has become brown and the diseased parts paler than before. On ulcerated surfaces, no trace of iodine will be found two hours after its application. Sometimes its action has been so powerful as to produce phlyctene.

The results of Dr. Richter's experiments are, that this solution acts as a caustic; that it has really a heroic action in cases of lupus; that its efficacy is remarkable in non-vascular goitre, scrofulous ulcers, constitutional syphilitic ulcers—doubtful in primitive chancres and eczema, and useless in psoriasis.—*Wener Med. Wochens-Schrift.*

ARSENICAL POISONING BY PAPER-HANGINGS.—Three children near Tipton have suffered from the arsenical emanations from a green bedroom paper in a newly-papered house. The symptoms were emaciation, pining, general restlessness (worse at night), and twitching of the facial muscles. Dr. Balenden, observing these symptoms, concluded that they were suffering from the effects of gradual poisoning; and, on being removed into another room, the children recovered.—*London Lancet.*

HOLOPATHY.—A distinguished physician of Paris, M. Marshal de Calvi, is now lecturing on a new medical doctrine, to which he has given the name of holopathy. M. Marshal considers that diseases, as they come before the medical practitioner, are only phases or episodes of a general affection of the organism, which affection or diathesis produces the episodes when circumstances favor their appearance. The lectures are causing some sensation in the French capital.—*Ibid.*

GINSENG.—A letter from St. Petersburg, dated 24th December, states that a scientific expedition has been organized, under the direction of M. Maak, to describe the interesting valley of Oussory, as well as the south-east of the Mantchoo territory to the frontiers of Corea, and to examine specially the ginseng (a renowned medicinal plant), to study the geographical extent of the Mantchoo territory, where this plant is propagated, and particularly the places in which it grows naturally, and to examine and describe the plantations of the Chinese who cultivate it. A great number of Russians propose to establish plantations of ginseng as an important produce for trade with China.—*London Journal of Pharmacy.*

MEDICAL STUDENTS IN PARIS.—The number of inscriptions taken at the Faculty of Medicine of Paris, at the commencement of the present scholastic year, was 988; namely, 922 for the degree of Doctor of Medicine, 66 for the grade of Officer of Health. Among these are 304 new inscriptions. In 1858, the total number of inscriptions was 1065; the number of new ones, 251. Last year, 34 foreign students were inscribed in the separate register; this year their number is 48. —*Medical News and Library.*

ON THE LOCAL EMPLOYMENT OF CHLOROFORM IN THE REDUCTION OF DISLOCATIONS.—M. Orliac, a French provincial practitioner, relates two cases of recent dislocation of the shoulder, in which rapid and painless reduction was accomplished. This result he attributes to having surrounded the shoulder with, and placed in the axilla, compresses imbibed with ten or twelve grammes of chloroform, these being applied two or three minutes prior to, and during the attempt at reduction. In this way, he observes, assistants may be dispensed with (an important matter in country practice), and pain be prevented, without any danger being incurred.—*Moniteur des Sciences Médicales.*

On the Duration of Life among Medical Men.—From the statistics of over 1000 persons of different occupations, who died within the last 100 or 150 years, at an age of at least 80 years, collected by Faber, and communicated to the *Würtemberg Correspondenzblatt,* we learn that among these long-lived persons, there were :—

1. Authors and learned without special profession, 86.
2. Statesmen and diplomatists, 96.
3. Clergymen and theologians of all beliefs, 150.
4. Artists, 167 (painters, engravers and sculptors, 72; poets, 42; musicians and composers, 26; actors, dancers and circus riders, 9—among whom were Franconi at 98, Noverre 105, and his two sons at 82 and 83).
5. Military, 190 (army, 159, navy, 31).
6. Naturalists and physicians, 192 (naturalists and physicians not in practice, 58; practising physicians, 134—of whom there were 3 over 100; 15 between 90 and 100; and 116 between 80 and 90 years at their death).

Now, though we do not accord to these statistics completeness in themselves, nor regard them as proper foundation for generalizations, we may surely draw from the above combination of ages the satisfactory result that the duration of life among physicians is by no means as limited as so many authors (König, Villermé, Deneufville, Hufeland, Escherich, Zeeman, &c. &c.) affirm.—*Medical and Surgical Reporter.*

Preservation of Bodies for Anatomical Purposes.—Professor Budge has found that bodies may be admirably preserved for a long period of time, whether for anatomical purposes, or for courses of operative surgery, by injecting into the carotid a preservative fluid composed of pyroligneous acid and sulphate of zinc, of each from eight to twelve drachms to seven pounds of water. Bodies thus injected have kept during eight weeks of intense summer heat, without giving rise to any putrefactive smell, the muscles retaining their red color, and though a little softened, admitting of good dissection. The injection does not prevent the subsequent injection of colored matters; and the knives used in dissection scarcely suffer at all.—*Virchow's Archiv.*

Death from Inhalation of Chloroform in Lisbon.—On the 12th of February, a man of 30 was to have been operated upon, at the St. Joseph Hospital of Lisbon, for a cystic tumor of the face. Chloroform was administered by means of a piece of lint, covered with a thin strip of linen, and held at a short distance from the nose and mouth. The stage of excitement suddenly ceased, the patient turned pale and pulseless, and made a long inspiration. He drew in long breaths at more and more distant intervals until he died—just six minutes after the chloroform had been placed against his mouth. The actual contact of the lint moistened with the chloroform had hardly lasted two minutes. On a *post-mortem* examination, the lungs were found gorged with blood and ecchymosed, the right auriculo-ventricular orifice dilated, the aorta full of brown, fluid blood, the cerebral matter and meninges injected.—*Gaz. Méd. de Lyon et O Archivo Universal de Lisboa.*

ADULTERATION OF FOOD AND DRUGS—that most dastardly and nefarious description of commercial roguery which impunity and long practice have combined to bring to such perfection in England—is fraught with difficulty and visited with heavy penalties in Paris. The vigilance of the Paris police almost suffices to ensure the public against the evils of slow poisoning which *we* are compelled to undergo to an extent which may account for many of the diseases prevalent in this country, and generally attributed to climate. Surely no supervision can be deemed superfluous, and no chastisement too severe, which may tend to obviate such horrors as we know to be practised on the English public, especially on the poor. When a Paris shopkeeper is caught either diluting, adulterating, or fraudulently mixing his merchandise, or in selling short weight or measure, he is first heavily fined, and then condemned to a public confession of his guilt by stating the particulars on a large placard, conspicuously exhibited in his shop during the pleasure of the court; so that he himself informs his customers he has been practising on their credulity, tampering with their health, and picking their pockets.—*Realities of Paris Life.*

PRESERVATIVE FLUID.—Dr. Passini recommends the following as an antiseptic mixture for the preservation of blood globules, nerves, ganglions, the retina, and the white tissues generally:—Protochloride of mercury, 1 part; chloride of sodium, 2 parts: glycerine, 13 parts; and distilled water, 113 parts.

MEDICAL COLLEGE OF GEORGIA.—The annual commencement of this institution took place in the city of Augusta on the 2d ult. The graduating class numbered 31, and the medical degree was conferred on the members by the President of the College; also the honorary degree upon Dr. J. R. Dickinson of Alabama and Dr. J. F. Knott of Georgia. Three prizes were awarded for two of the best theses and the best clinical report.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, APRIL 21st, 1860.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week, ...	37	47	84
Average Mortality of the corresponding weeks of the ten years, 1850–1860,	40.8	37.1	77.9
Average corrected to increased population, ...	..	..	88.9
Deaths of persons above 90, ...	..	1	1

Mortality from Prevailing Diseases.

Consumption.	Croup.	Scarlet Fever.	Pneumonia.	Measles.	Smallpox.
16	1	2	7	1	5

METEOROLOGY.

From Observations taken at the Cambridge Observatory.

Mean height of Barometer, ...	30.135	Highest point of Thermometer, ...	67
Highest point of Barometer, . . .	30.508	Lowest point of Thermometer, ...	24
Lowest point of Barometer, ...	29.726	Whole am't of Rain in the week . .	0.228 in.
Mean Temperature, ...	43.14		

DIED,—At the residence of Dr. Heaton, Clifton, Mich., 2d inst (to which place he had gone for the benefit of his health), Adams Wiley, M.D., of Roxbury, Mass., 43 years, 6 months.

Deaths in Boston for the week ending Saturday noon, April 21st, 84. Males, 37—Females, 47.—Asthma, 1—disease of the bowels, 1—inflammation of the bowels, 4—congestion of the brain, 1—disease of the brain, 1—inflammation of the brain, 1—colic, 1—consumption, 16—convulsions, 3—croup, 1—debility, 3—infantile diseases, 2—puerperal diseases, 2—dropsy, 2—dropsy in the head, 3—epilepsy, 1—scarlet fever, 2—typhoid fever, 2—disease of the heart, 1—congestion of the lungs, 3—disease of the lungs, 1—inflammation of the lungs, 7—measles, 1—old age, 1—palsy, 3—paramenia, 1—rheumatism, 1—scrofula, 1—scalded, 2—smallpox, 5—suicide, 1—tabes mesenterica, 1—tuberculosis, 1—tumor, 2—unknown, 5.

Under 5 years, 27—between 5 and 20 years, 12—between 20 and 40 years, 21—between 40 and 60 years, 10—above 60 years, 14. Born in the United States, 56—Ireland, 23—other places, 5.